



# SAFETY DATA SHEET

## EFFITIX® Plus Topical Solution for Dogs

### 1. IDENTIFICATION

**Product Name**  
**Recommended use of the chemical and restrictions on use**

EFFITIX® Plus Topical Solution for Dogs

**Identified uses**

Topical insecticide

**Restrictions on Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For external use on dogs over 8 weeks of age.

**Company Identification**

Virbac AH, Inc.  
P.O. Box 162059  
Fort Worth, Texas 76161  
(800) 338-3659

**Customer Information Number**

**Emergency Telephone Number**

**Chemtrec Number**

**Other Emergency Number:**

(800) 424-9300

Poison Control Center: 1-800-222-1222 (human)

HOT LINE NUMBER: 1-800-345-4735 (human and pet)

**Issue Date**

January 18, 2016

**Supersedes Date**

This is the first issue.

*Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)*

### 2. HAZARD IDENTIFICATION

#### Hazard Classification

Acute Toxicity (Oral) - Category 4

Serious eye damage/eye irritation - Category 2A

Specific Target Organ Toxicity (Single Exposure) - Category 1

Specific Target Organ Toxicity (Repeat Exposure) - Category 1

Carcinogenicity - Category 2

Acute hazard to the aquatic environment - Category 1 (This classification not adopted by OSHA)

#### Label Elements

Hazard Symbols



Signal Word: Danger

#### Hazard Statements

Harmful if swallowed.

Causes serious eye irritation.

Causes damage to organs (central nervous system) (route of exposure: oral)

Causes damage to organs (central nervous system) through prolonged or repeated exposure.

Suspected of causing cancer. (route of exposure: oral)

Very toxic to aquatic life.



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## 2. HAZARD IDENTIFICATION

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### Precautionary Statements

#### Prevention

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wash hands thoroughly after handling.  
Do not eat, drink, or smoke when using this product.  
Wear eye protection, face protection, protective clothing, and protective gloves.  
Do not breathe mist, vapors or spray.  
Avoid release to the environment.

#### Response

If swallowed: Call a poison center or doctor if you feel unwell. Rinse mouth.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.  
If exposed or concerned: Call a poison center or doctor.  
Get medical advice or attention if you feel unwell.  
Collect spillage.

#### Storage

Store locked up.

#### Disposal

Dispose of contents/container in accordance with local regulation.

### Other Hazards

See Section 15 for FIFRA label elements.

### Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

|                           |          |
|---------------------------|----------|
| Acute oral toxicity       | <5%      |
| Acute dermal toxicity     | <5%      |
| Acute inhalation toxicity | 45 - 55% |
| Acute aquatic toxicity    | 45 - 55% |

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

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### Synonyms:

This product is a mixture.

| Component Name | CAS Number  | Concentration |
|----------------|-------------|---------------|
| Fipronil       | 120068-37-7 | 6.0%          |
| Permethrin     | 52645-53-1  | 44.8%         |
| Pyriproxyfen   | 95737-68-1  | 1.8%          |
| Glycol ether   | NA          | 40 - 50%      |

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## 4. FIRST-AID MEASURES

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### Description of necessary first-aid measures

#### Eyes

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye. Call a poison control center or doctor for treatment advice.



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**4. FIRST-AID MEASURES**

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**Skin**

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Ingestion**

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything to an unconscious person.

**Inhalation**

Remove person to fresh air. Seek medical attention if symptoms persist.

**Most important symptoms/effects, acute and delayed**

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

**Indication of immediate medical attention and special treatment needed**

**Notes to Physicians**

Treat symptomatically.

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**5. FIRE-FIGHTING MEASURES**

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**Extinguishing Media**

Water spray, carbon dioxide and dry chemical. Use extinguishing media appropriate for surrounding materials.

**Unusual Fire and Explosion Hazards**

Can release hazardous vapors during a fire.

**Protective Equipment for Fire-Fighting**

Wear full protective clothing and self-contained breathing apparatus.

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**6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment and emergency procedures**

Wear appropriate protective clothing.

**Environmental Precautions**

Prevent the material from entering drains or watercourses.

**Methods and materials for containment and cleaning up**

Contain and transfer into suitable containers for recovery or disposal.

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**7. HANDLING AND STORAGE**

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**Precautions for safe handling**

Wear appropriate protective clothing. Wash hands thoroughly after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.



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#### 7. HANDLING AND STORAGE

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##### Conditions for safe storage

Store in tightly closed original container in a cool, dry, locked place. Keep away from children and pets.

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#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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##### Control parameters

Exposure limits are listed below, if they exist.

##### Glycol ether

Supplier recommended limit: 25 ppm TWA

##### Appropriate engineering controls

No specific measures necessary. Good general room ventilation is expected to be adequate to control airborne levels.

##### Individual protection measures

###### Respiratory Protection

Not required under normal conditions of use.

###### Skin Protection

Chemical resistant gloves.

###### Eye/Face Protection

Safety glasses or goggles.

###### Body Protection

Normal work wear.

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#### 9. PHYSICAL AND CHEMICAL PROPERTIES

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##### Appearance

| Physical State                          | Liquid            |
|-----------------------------------------|-------------------|
| Color                                   | Clear yellow      |
| Odor                                    | Mild              |
| Odor Threshold                          | No data available |
| pH                                      | No data available |
| Specific Gravity                        | No data available |
| Boiling Range/Point (°C/F)              | Not applicable    |
| Melting Point (°C/F)                    | Not applicable    |
| Flash Point (PMCC) (°C/F)               | No data available |
| Vapor Pressure                          | Not applicable    |
| Evaporation Rate (BuAc=1)               | Not applicable    |
| Solubility in Water                     | No data available |
| Vapor Density (Air = 1)                 | Not applicable    |
| VOC                                     | Not applicable    |
| Partition coefficient (n-octanol/water) | Not applicable    |
| Viscosity                               | Not applicable    |
| Auto-ignition Temperature               | No data available |
| Decomposition Temperature               | No data available |
| Upper explosive limit                   | No data available |
| Lower explosive limit                   | No data available |
| Flammability (solid, gas)               | No data available |



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**10. STABILITY AND REACTIVITY**

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**Reactivity**

Data is not available

**Chemical Stability**

Stable under normal conditions.

**Possibility of hazardous reactions**

Hazardous polymerization will not occur.

**Conditions to Avoid**

Heat - high temperatures

**Incompatible Materials**

None known.

**Hazardous Decomposition Products**

Oxides of carbon - aldehydes - ketones - organic acids - hydrogen fluoride - oxides of nitrogen - oxides of sulfur - hydrochloric acid

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**11. TOXICOLOGICAL INFORMATION**

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**See product insert and/or packaging for additional information.**

**Acute Toxicity**

Product

Oral LD50 (rat) est. 550 mg/kg (UK-VMD) (based on similar product)

Dermal LD50 (rabbit) >2000 mg/kg (based on similar product)

Fipronil

Oral LD50 (rat) 50 mg/kg < LD50 < 500 mg/kg (EPA)

Dermal LD50 (rabbit) >2000 mg/kg (EPA)

Inhalation LC50 (rat) 0.05 mg/L < LC50 < 0.5 mg/L (EPA)

Pyriproxyfen

Oral LD50 (rat) >5000 mg/kg

Dermal LD50 (rabbit) >2000 mg/kg (EPA)

Inhalation LC50 (rat) 1.3 mg/L 4hr

Permethrin

Oral LD50 (rat, female) 2280 mg/kg (EPA)

Dermal LD50 (rabbit) >2000 mg/kg (EPA)

**Specific Target Organ Toxicity (STOT) – single exposure**

Fipronil: In a single dose study in rats adverse neurological effects were observed. A NOAEL of 0.5 mg/kg bodyweight was established. (UK-VMD)

Permethrin: Acute Neurotoxicity Study in Rats: LOAEL = 75 mg/kg/day based on observations of clinical signs (i.e. aggression, abnormal and/or decreased movement) and increased body temperature (EPA) A NOAEL for neurotoxicity was established at 15 mg/kg per day. (UK-VMD)

Pyriproxyfen: Subchronic oral toxicity studies conducted with Pyriproxyfen Technical in the rat, mouse and dog indicate a low level of toxicity. The NOELs from these studies were 1000 ppm (149.4 mg/kg/day) in mice, 100 mg/kg/day in dogs and 400 ppm (23.5 mg/kg/day) in rats.



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**11. TOXICOLOGICAL INFORMATION**

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**Specific Target Organ Toxicity (STOT) – repeat exposure**

Fipronil: In a 14 day repeat dose neurotoxicity study in dogs, the animals displayed neurotoxic signs which included hypoactivity, salivation, ataxia, convulsions, tremors, stiffened body, and muscle twitching. (UK-VMD)

Permethrin: 15-Day Inhalation Study in Rats LOAEL = 0.583 mg/l (converts to oral equivalent of 154 mg/kg/day) based on body tremors and hypersensitivity to noise. (EPA). A neurotoxicity study in rats showed dose-related responses. At doses greater than 1500 ppm animals displayed tremors, splayed hind legs and staggered gait. Deaths were observed at 4000 ppm. A NOAEL of 750 ppm was established. (UK-VMD)

Pyriproxyfen: No significant systemic toxicity was observed in either the 21-day dermal toxicity study in rats or the 28-day inhalation toxicity study in rats. Subchronic and chronic toxicity studies in mice, rats and dogs indicate that the liver and kidney are the principal target organs with slight anemia occurring in the rodent species.

**Serious Eye damage/Irritation**

Product: In- vitro study results classify this product as a potentially severe eye irritant. (UK-VMD, based on similar substance)

Fipronil: Moderate eye irritation (rabbit). (EPA)

Permethrin: Moderate eye irritation (rabbit). (EPA)

Pyriproxyfen: Eye irritation reversible within 7 days (Category III - EPA)

**Skin Corrosion/Irritation**

Pyriproxyfen: Mild or slight skin irritation at 72 hours. (Category IV - EPA)

**Respiratory or Skin Sensitization**

Product: Non-sensitizing and non-irritating (dermal – guinea pig) (based on a similar product).

Fipronil: Not a dermal sensitizer (EPA)

Pyriproxyfen: Non-sensitizing (guinea pig)

**Carcinogenicity**

Permethrin: EPA Classification: Likely to be Carcinogenic to Humans (by oral route) based on two reproducible benign tumor types (lung and liver) in the mouse, equivocal evidence of carcinogenicity in Long Evans rats, and supporting structural activity relationships (SAR) information.

Fipronil: EPA: The carcinogenic potential of Fipronil has been classified as a Group C possible human carcinogen based on increases in thyroid follicular cell tumors in both sexes of the rat, which were statistically significant by both pair-wise and trend analyses. These results are thought to be due to a rodent specific liver effect not relevant to humans.

Pyriproxyfen: There was no evidence of carcinogenicity in either a 78-week mouse feeding study or in the 2-year rat chronic/carcinogenicity study. Pyriproxyfen is classified as a “Group E” chemical - no evidence of carcinogenicity to humans.

**Germ Cell Mutagenicity**

Available data indicates this product is not expected to be mutagenic.

**Reproductive Toxicity**

Fipronil: Studies indicate that Fipronil is a non-teratogenic substance and does not cause reproductive toxicity. (UK-VMD)

Pyriproxyfen: There was no evidence of increased susceptibility to rat and rabbit fetuses in prenatal developmental toxicity studies or to rat offspring in the 2-generation rat reproduction study. No evidence of developmental toxicity was seen in special studies that evaluated pyriproxyfen toxicity following perinatal and prenatal exposure in rats.



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#### 11. TOXICOLOGICAL INFORMATION

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**Aspiration Hazard**

Not an aspiration hazard.

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#### 12. ECOLOGICAL INFORMATION

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This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters or rinsate.

**Ecotoxicity**Fipronil

LC50 Bluegill sunfish 0.085 mg/l 96h

EC50 Daphnia magna 0.19 mg/l 48h

Permethrin

LC50 Bluegill sunfish 0.79ppb 48 hr

EC50 Hexagenia bilineata 0.1ppb 48hr

Pyriproxyfen: Moderately to highly toxic to fish and moderately to very highly toxic to aquatic invertebrate species.

**Mobility in soil**

No relevant studies identified.

**Persistence/Degradability**

No relevant studies identified.

**Bioaccumulative Potential**

No relevant studies identified.

**Other adverse effects**

No relevant studies identified.

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#### 13. DISPOSAL CONSIDERATIONS

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**Product Disposal:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. If empty, offer for recycling if available.

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#### 14. TRANSPORT INFORMATION

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Contact supplier for transport information.

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#### 15. REGULATORY INFORMATION

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**United States TSCA Inventory**

This product is excluded from TSCA as it regulated under FIFRA Section 3(2)(B)(ii) when used as a pesticide.



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**15. REGULATORY INFORMATION**

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**Federal Insecticide, Fungicide, and Rodenticide Act**

This is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

Following is the hazard information as required on the pesticide label:

Front Panel:

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**READ ENTIRE LABEL BEFORE EACH USE**

Back Panel:

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**HAZARDS TO HUMANS:** Harmful if swallowed or absorbed through the skin. Causes eye irritation. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage and disposal.

**PESTICIDE STORAGE:** Keep this product in its tightly closed original container, when not in use. Store in a cool, dry (preferably locked) area this is inaccessible to children and animals.

**PESTICIDE/CONTAINER DISPOSAL:** **If empty:** Nonrefillable. Do not use or refill this container. Offer for recycling, if available. **If partially filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

**Canada DSL Inventory**

This product is excluded from DSL listing as it is regulated under the Pest Control Products Act when used as a pesticide.

**SARA Title III Sect. 311/312 Categorization**

Immediate (acute) Delayed (Chronic)

**SARA Title III Sect. 313**

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations: Glycol ether - Permethrin (52645-53-1)

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**16. OTHER INFORMATION**

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**Legend**

ACGIH: American Conference of Governmental Industrial Hygienists

BOD: Biological Oxygen Demand

CAS#: Chemical Abstracts Service Number

DSL: Domestic Substances List

ECHA: European Chemicals Agency

EPA: Environmental Protection Agency

FIFRA: Federal Insecticide, Fungicide and Rodenticide Act

HDT: Highest Dose Tested

HMIS: Hazardous Materials Identification System IARC: International Agency for Research on Cancer

LC50: Lethal Concentration 50%



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**16. OTHER INFORMATION**

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LD50: Lethal Dose 50%  
LOEL: Lowest Observed Effect Level  
N/A: Denotes no applicable information found or available  
NFPA: National Fire Protection Association  
NOEL: No Observed Effect Level  
OSHA: Occupational Safety and Health Administration  
PEL: Permissible Exposure Limit  
TSCA: Toxic Substances Control Act  
SARA: Superfund Amendments and Reauthorization Act  
SDS: Safety Data Sheet  
STEL: Short Term Exposure Limit  
WHMIS: Workplace Hazardous Materials Information System  
TLV: Threshold Limit Value  
TSCA: Toxic Substance Control Act  
UK-VMD: United Kingdom Veterinary Medicines Directorate

Revision Date: January 18, 2016  
Replaces: This is the first issue.  
Changes made: Not applicable.

**Information Source and References**

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

**Prepared By:** EnviroNet LLC.

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